

**VALIDITY ISSUES OF ROCKY MOUNTAIN
RESOURCES' LIMESTONE CLAIMS, GLENWOOD
SPRINGS, COLORADO:**

*A critique of problems and deficiencies based on a review of the
legal history of the Mid-Continent Limestone Quarry and RMR's
Plan of Operations dated November 21, 2018 and the Mid-
Continent Limestone Quarry Plan of Operations Modification
dated March 8, 2019*

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EXECUTIVE SUMMARY

Future Production in Proposed Plan of Operation. The Plan of Operations dated November 21, 2018, and the Plan Modification dated March 8, 2019, point out that the Mid-Continent Limestone Quarry, which now produces 50,000 to 75,000 tons of limestone products per year, will be expanded to 320 acres of quarrying within a 440-acre permit area. Rocky Mountain Resources (RMR) plans quarry production of 5 million tons per year of combined chemical and dolomitic limestone with at least 20 years of quarrying operations to mine a minimum of 100 million tons. The maximum amount of production is estimated to be 50 million tons of limestone and 100 million tons of dolomitic limestone.

Law of Limestone. The Multiple Surface Use Act (Common Varieties Act) of 1955 removed limestone from mining claim location but left open the location of “deposits of such materials which are valuable because the deposit has some property giving it distinct and special value...” In 1969, the *Pfizer* case held “that limestone containing 95 percent or more calcium and magnesium carbonates is an uncommon variety of limestone which remains subject to location under the mining law.” In *McClarty v. Secretary of the Interior*, 408 F.2d 907, 909 (9th Cir. 1969), the Court adopted a five-part test for determining if limestone had a unique property that gives the deposit a distinct and special value and renders it locatable. In 2003, the regulations were amended so as to retain the definition of locatable limestone as well as codified the five-point *McClarty* decision in 43 CFR 3830.12(b). Additive to the above legal case is *United States v. Coleman*. In *United States v. Coleman*, 390 U.S. 599, 602-603 (1968), the Supreme Court upheld the requirement for stone that “the mineral can be ‘extracted, removed and marketed at a profit’—the so-called ‘marketability test.’”

Two Categories of Locatable Limestone. The above legal framework allows limestone to be locatable in one of two ways depending on the product: (1) limestone of chemical or metallurgical grade, or that is used for making cement, and is 95 percent or more total carbonates may be locatable if the product requires 95 percent or more total carbonates and can meet the marketability test of *Coleman*; or (2) aggregate and dimension stone must satisfy both the *McClarty* and the marketability tests for locatable limestone.

How do we know the limestone is at least 95 % total carbonates? Under the mining law a claimant is required to have physical exposure of the valuable minerals and have completed the exploration phase and be ready for development. This is not accomplished for a limestone deposit unless core drilling or deep trenching has revealed the geologic continuity and grade of the deposit. Drilling or trenching is normally conducted while the Government observes and verifies by taking a split of the core or samples.

Exploration Drilling Required to Establish Discovery. RMR apparently has not performed exploratory drilling on all the 320 acres on the proposed quarry site. By its own admission in the Plan of Operations, RMR plans exploration drilling “to

determine deposit extents, quality, boundaries, and composition” before mining each part of the quarry. This is clearly an admission by the company that it has not made a discovery on most, if not all, of the 44 placer mining claims. It is well established in the case law that if the deposit requires additional exploration to determine grade and extent of the deposit, a discovery has not been made.

Plan of Operations Must Be Prepared After Exploration. Most baffling is why RMR has filed a proposed Plan of Operation before it has characterized the grade and reserves of the limestone. From all reports, there has been no exploration drilling on most, if not all, of the land outside the existing Mid-Continent quarry. How can RMR estimate reserves or resources, propose products to be mined, design quarry operations, design a processing plant, anticipate and mitigate environmental problems and design a reclamation plan when it has little or no knowledge of the limestone deposit it intends to mine.

Difficult Market Conditions for Cement and Aggregate. There is minimal or no information in the Plan of Operation as a comprehensive market and transportation plan. Products and targeted markets are generalized with no confirmation that the quarry rock has sufficient limestone in excess of 95% suitable for cement production. RMR would face intense competition in the Front Range and Western Slope in the aggregate market. There is little likelihood that any of the cement plants on the Front Range, Colorado and southern Wyoming would use the RMR limestone as a plant feed component because each of these plants has long-term adequate limestone. Cement plants require strict chemical and size specifications, difficult if not impossible for RMR to provide. The added transportation costs by rail to those plants would add in excess of \$9 per ton when compared to the local sources. RMR has provided no details on rail loadout and rail car storage in the Glenwood Springs area.

Mining Claim Confers No Right If No Discovery. In *Cole v. Ralph*, 252 U.S. 286, 294-296 (1920), the Supreme Court held that “location is the act or series of acts whereby the boundaries of the claim are marked, etc., but it confers no right in the absence of discovery, being essential to valid claim.” RMR currently has no discovery on most, if not all, of its 44 placer claims and has no rights under the Mining Law until it can complete the exploratory drilling and demonstrate a discovery and validate the claims. The likelihood of RMR making a discovery on all 44 claims through exploratory drilling is very unlikely.

No Approval of Plan Until Discovery Verified. The Plan of Operation cannot be approved for any part of the property where RMR has not conducted exploratory drilling and made a discovery. Furthermore, the proposed Plan should not be approved until BLM has completed the mineral report and verified the validity of the claims. 43 CFR 3809.101.

RMR’s List of Proposed Limestone Products from the Quarry. In the Plan of Operations Modification, RMR specified 15 limestone products that it intends to produce from the Mid-Continent Quarry. With RMR planning an annual production of 5 million tons, the obvious questions are (1) what products does RMR intend to

market, (2) how much of each product is to be produced, and (3) can each product be marketed at a present profit. Each product must be critically evaluated on its own unique circumstances (the use, specifications required for that use, the law, and the market); the validation of one product would not validate any others, regardless of the purity of the limestone.

Does RMR Plan to Mine Aggregate. There is some evidence in the proposed Plan that RMR may be planning significant production of aggregate from the quarry, despite the fact that aggregate would most likely not qualify as a locatable mineral under the *McClarty* tests or any other standards. Not only is the name of the company “RMR Aggregates, Inc.,” but on page 1 of the Brierley Associates report in the Plan of Operations states that the company plans to mine “the Leadville formation for rock dust and aggregate.” Also, the Plan Modification states at page 13-0: “While the lower portions of the Leadville Limestone are not suitable for use as a metallurgical product due to elevated levels of silica, they are well suited for use in aggregate materials. The Limestone mined at the Mid-Continent Quarry will be marketed as either metallurgical or for use in aggregates.” Furthermore, mining of large tonnages of aggregate could explain the proposed production of 5 million tons per year; by contrast, it seems very unlikely that RMR could market 5 million tons of rock dust per year. Based on our understanding current mining operations at the Mid-Continent quarry, RMR is largely extracting limestone for aggregate-type uses rather than metallurgical uses. If this is the case, a common variety determination is necessary.

Immense Quantities of Identical Limestone Outside Claims. In *Coleman*, the United States Supreme Court said “we believe that the Secretary of the Interior was . . . correct in ruling that in view of the immense quantities of identical stone found in the area outside the claims, the stone must be considered a common variety.” By all reports, there are immense quantities of identical limestone exposed in the area outside of the RMR claims.

OVERVIEW OF THE LAW OF LIMESTONE

The Common Varieties Act

Congress generally removed limestone from location under the mining laws with the passage of the Multiple Surface Use Act of 1955, also known as the Common Varieties Act, 30 U.S.C. § 611 (2000). In doing so, Congress left open the possibility that “deposits of such materials which are valuable because the deposit has some property giving it distinct and special value...” are still locatable:

No deposit of common varieties of sand, stone, gravel, pumice, pumicite, or cinders * * * shall be deemed a valuable deposit within the meaning of the mining laws of the United States so as to give effective validity to any mining claim hereafter located under such laws. * * * “Common varieties” as used in this [Act] does not include deposits of such materials which are valuable because the deposit has some property giving it distinct and special value * *

*

This language formed the basis for a Departmental regulation implementing the Act, 43 CFR 3511.1(b) (1965); it was promulgated in 1964 recodified at 43 CFR 3711.1(b) (2002) in 1970. The recodified rules stated, in pertinent part:

(b) * * * Limestone suitable for use in the production of cement, metallurgical or chemical grade limestone, gypsum, and the like are not "common varieties."

The Pfizer Case

In *United States v. Pfizer*, 76 I.D. 331, 337-339 (1969), the Department analyzed the Congressional statements regarding limestone, and the meaning of the phrase "[l]imestone suitable for use in the production of cement, metallurgical or chemical grade limestone, gypsum, and the like" found in 43 CFR 3711.1(b). The Assistant Solicitor began with the identification of the problem created by considering limestone as potentially locatable, given its ubiquitous nature. The Assistant Solicitor stated at 339:

Limestone is, without question, a mineral of very widespread occurrence. Approximately 15 percent of the United States * * * is underlain by limestone or carbonate rock, and about 70 percent of all crushed stone used in the United States is made from such materials. * * * The Department has held that limestone is included within the meaning of the term "stone" as it is used in the 1955 act, and that a deposit of limestone is a common variety of stone within the meaning of the act if the material found therein does not satisfy the criteria of the statute and the regulations for exclusion from the category of "common varieties." *See e.g., Solicitor's opinion M-36619 (Supp.)* (October 5, 1961) * * *.

Pfizer's holding that metallurgical or chemical grade limestone containing 95% or more total carbonates is locatable" has been followed since 1969. The Assistant Solicitor said at 342-343:

[T]he courts have held that a limestone averaging 95 percent or more total carbonates constituted a chemical or metallurgical grade limestone within the meaning of the tax laws. Since the rulings were based on the findings that such was the commonly understood commercial meaning of the terms "chemical grade" and "metallurgical grade" limestone, we are persuaded that the same meaning should be given to the Senate committee's understanding of what would constitute an uncommon variety of limestone. We hold, therefore, that limestone containing 95 percent or more calcium and magnesium carbonates is an uncommon variety of limestone which remains subject to location under the mining laws.

The McClarty Guidelines

In *McClarty v. Secretary of the Interior*, 408 F.2d 907, 909 (9th Cir. 1969), the 9th Circuit Court adopted a five-part test for determining generally whether a mineral deposit is a common variety of material. These guidelines are as follows:

(1) [T]here must be a comparison of the mineral deposit in question with other deposits of such minerals generally; (2) the mineral deposit in question must have a unique property; (3) the unique property must give the deposit a distinct and special value; (4) if the special value is for uses to which ordinary varieties of the mineral are put, the deposit must have some distinct and special value for such use; and (5) the distinct and special value must be reflected by the higher price which the material commands in the market place.

Summary of Locatable Limestone

In *United States v. Foresyth*, 94 I.D. 453, 484-485 (1987), the Board summarized the two standards under which limestone may be located: (1) 95 % or greater total carbonates, has an uncommon variety use and meets the prudent man and marketability tests or (2) satisfies the *McClarty* Guidelines for locatable limestone. The Board stated at 484-485:

The relevant legal standards applicable to this case are relatively easy to state. This particular type of limestone (95 percent or greater in calcium and magnesium carbonates) is an uncommon variety of limestone and is therefore locatable. *Citation Omitted*. However, as any mining claim must, in order to be declared valid, contain a valuable mineral deposit, the contained limestone must meet the requirement of the prudent man and marketability tests.

* * * * *

This special value can be demonstrated either by sales for uses which require particular characteristics [uncommon variety use] or by an increase in marketplace price if sold for "common variety" uses.

Limestone Suitable for Cement Cannot Be Put to Common Variety Use

In *United States v. Alaska Limestone Corp.*, 66 IBLA 316, 324 (1982), the Board dealt with limestone claims that had sufficient carbonate content to be suitable for cement; however, the claims were situated too far from the market for that uncommon variety use. The Board pointed out that it could not be used for a concrete aggregate or as a soil additive:

While the subject limestone does have the physical properties to make it "suitable for use in the manufacture of cement," if it has no value for that

purpose because of its *location*, a “value” attributable only to its use as concrete aggregate or as a soil additive would not be cognizable.

Current Regulations

In 2003, the Department amended a number of its regulations, including ¹¹43 CFR 3711.1 (2000). In this rulemaking, the Department retained the specific definition of “locatable” limestone as specified in *Pfizer* and codified the five-point test set forth in the *McClarty* decision. In 43 CFR 3830.12(b), the rule characterizes a locatable mineral as follows:

(b) Under the Surface Resources Act, certain varieties of mineral materials are locatable if they are uncommon because they possess a distinct and special value. As provided in *McClarty v. Secretary of the Interior*, 408 F.2d 907 (9th Cir. 1969), we determine whether mineral materials have a distinct and special value by:

(1) Comparing the mineral deposit in question with other deposits of such minerals generally;

(2) Determining whether the mineral deposit in question has a unique physical property;

(3) Determining whether the unique property gives the deposit a distinct and special value;

(4) Determining whether, if the special value is for uses to which ordinary varieties of the mineral are put, the deposit has some distinct and special value for such use; and

(5) Determining whether the distinct and special value is reflected by the higher price that the material commands in the market place. * * *

(d) Limestone of chemical or metallurgical grade, or that is suitable for making cement, is subject to location under the mining laws.

All Limestone Claims Are Subject to the Marketability Test

In *Foster v. Seaton*, 271 F.2d 836, 838 (DC Cir 1959) the Court upheld the requirement that every mining claim show present marketability; this requirement has been followed by the Interior Department since *Layman v. Ellis*, 52 I.D. 714 (1929):

With respect to widespread nonmetallic minerals such as sand and gravel, however, the Department has stressed the additional requirement of present marketability in order to prevent the misappropriation of lands containing these minerals by persons seeking to acquire such lands for purposes other than mining. Thus, such a “mineral locator or applicant, to justify his

possession, must show that by reason of accessibility, bona fides in development, proximity to market, existence of present demand, and other factors, the deposit is of such value that it can be mined, removed and disposed of at a profit." *Layman v. Ellis*, 54 I.D. 294, 296 (1933).

In *United States v. Coleman*, 390 U.S. 599, 602-603 (1968), the Supreme Court held that "profitability is an important consideration in applying the prudent man test..." Furthermore, the Court upheld the requirement that "the mineral can be 'extracted, removed and marketed at a profit'—the so-called 'marketability test.'"

In *Lara v. Secretary v. Secretary of the Interior*, 820 F. 2d 1535, 1541 (9th Cir. 1987), the Court indicates that marketability test is more stringent for common materials such as limestone than precious minerals. The marketability test for common materials requires that they "presently" can be extracted and marketed at a profit.

CLAIMS ARE NOT SUPPORTED BY A DISCOVERY

Exploration Drilling Needed to Establish Discovery

Although RMR contends that exploration drilling has occurred within most of the expansion area (outside the existing disturbed quarry site) during the past 30 to 40 years, it not only provides no documentation of this drilling information in the operating plan, but volunteers that the drill data "does not have the necessary level of accuracy needed for today's mining engineering requirements." Considering the steep terrain of the proposed quarry site, it is very unlikely that meaningful exploration drilling was conducted on the entire expansion area during the past 30 to 40 years. Since the BLM 3809 Surface Management regulations have been in effect since January 1, 1981, any such drilling operations would have been authorized by the BLM under a notice or a plan and the local BLM would have a record of this exploration drilling.

By its admission in the Proposed Operating Plan and the Plan Modification, RMR plans exploration drilling "to determine deposit extents, quality, boundaries, and composition." The Plan Modification states at page 5-13:

* * * As a part of initial quarry development, and then as a part of ongoing operations, RMR will conduct additional **exploration drilling** to determine deposit extents, quality, boundaries, and composition. The data gathered in the **exploration drilling** will be used to model the geologic characteristics of the formation and create engineered plans for bench and backslope development along with reclamation surfaces. All drilling will be conducted in areas where quarry activities will occur shortly after the **exploration drilling** is completed. *Emphasis Added.*

This is clearly an admission by the company that it has not made a discovery on the 44 placer mining claims. If the deposit requires additional exploration to delineate the ore reserves and determine grade or quality before development may be confidently started, a discovery has not been made. In *Converse v. Udall*, 399 F2d

616 (9th Cir. 1968), *cert. denied*, 393 U.S. 1025 (1969), the Court affirmed the action of the Department of the Interior in drawing a sharp distinction between "exploration" for and "discovery" of a valuable mineral deposit. The court stated at 620 and 621:

Converse attacks the Secretary for drawing a distinction between "exploration," "discovery," and "development." But the authorities we have cited show that there is a difference between "exploration" and "discovery." * * They do not support the attack here made upon the distinction between the exploration work which must necessarily be done before a discovery, and the discovery itself, which is what the Secretary talks about when he distinguishes between "exploration" and "discovery." The real question here is not whether there is such a distinction, but whether Converse's exploration had resulted in a legal discovery.

In *United States v. New Mexico Mines, Inc.*, 3 IBLA 101 (1971), the Board offered the following definition for "exploration" as "the process of searching for a valuable mineral deposit. The finding of mineralization of sufficient value to encourage further exploration does not successfully conclude the exploratory process or constitute a discovery."

In *United States v. Lundy*, A_30724 (June 30, 1967), specific examples of exploration work are discussed by the Secretary:

There is a clear distinction between "exploration" and "development" as they relate to discovery under the mining laws. The separate stages of mining activity serve as a basis for determining what further mining activity a prudent man would be justified in undertaking. Exploration work includes such activities as geophysical or geochemical prospecting, diamond drilling, sinking an exploratory shaft or driving an exploratory adit. It is that work which is done prior to a discovery in an effort to determine whether the land is valuable for minerals. * *

Mining Claim Confers No Right Where No Discovery

In *Cole v. Ralph*, 252 U.S. 286, 294-296 (1920), the Supreme Court held that "location is the act or series of acts whereby the boundaries of the claim are marked, etc., but it confers no right in the absence of discovery, being essential to valid claim." The Court also noted that in the case where the claim is located before discovery, "the location becomes effective from the date of the discovery; but in the presence of an intervening right, it must remain of no effect."

As mentioned above, RMR explained why it needs to conduct exploration drilling on its 44 placer claims in order to make a discovery and validate the claims. The Plan of Operation cannot be approved for any part of the property that RMR has not conducted exploratory drilling and established a discovery. The drilling operations must be verified by the BLM mineral examiner(s) and they must be given a split of the cores for independent assaying. Furthermore, the Plan of Operations must not

be approved until BLM has completed the mineral report and verified that the specific minerals are locatable and marketable at a profit.

RMR'S PROPOSED PRODUCTS FROM THE QUARRY

RMR's List of Limestone Products

In its Plan of Operations, RMR specified 11 "Chemical Limestone Products" and 4 "Dolomitic Limestone Products" that it intends to produce from the Mid-Continent Quarry (Table 1-1, page 1-14, Plan Modification). Apparently concerned with the lack of specificity in this laundry list of limestone and dolomite uses, BLM requested more information: "Include products/end use of Leadville Limestone." RMR's response was remarkably unresponsive (Plan Modification at page 1-13):

Large portions of the Leadville Limestone formation at the Mid-Continent Quarry site are over 95% limestone. Limestone of this purity, also known as chemical limestone, is used for high end purposes such as rock dust for coal mines, cement manufacturing, acid-neutralization, household and commercial products manufacturing, glass manufacturing, animal feed, agriculture, and others. Table 1-1 shows a breakdown of the products chemical limestone is used for. This high-quality limestone is found in the upper 30-40% of the Leadville Limestone formation within the current and proposed quarry areas. RMR intends to use the limestone for the purposes listed in Table 1-1 and other uses as they arise and become economically viable.

Clearly, the above statement is generic language that could apply to any limestone property anyplace in the world. Table 1-1 appears to be merely a laundry list of the various uses of limestone and dolomite. The "Chemical Limestone Products" include rock dust, acid neutralization, cement component, industrial filler, fly ash replacement, dimension stone, steel making, glass manufacturing, water treatment, animal feed and agricultural supplement. The "Dolomitic Limestone Products" include high-strength crushed aggregate, steel making, agriculture supplement and dimension stone. Among the products listed, dimension stone, animal feed, agricultural supplement, high-strength crushed aggregate would not qualify unless they passed the McClarty Tests—which is very unlikely. Furthermore, a number of other products on the list probably would not qualify. Each product must be examined in light of its percentage of total carbonates and show evidence that the high purity (95 % or greater total carbonates) is essential to the industrial use of the product; otherwise, it must be shown that the product can qualify for location under the *McClarty* tests.

Does RMR Plan to Mine Aggregate

There is some evidence in the Plan Modification that RMR may be planning significant production of aggregate products from the quarry. As stated in the Plan Modification at 13-0:

While the lower portions of the Leadville Limestone are not suitable for use as a metallurgical product due to elevated levels of silica, they are well suited for use in aggregate materials. The Limestone mined at the Mid-Continent Quarry will be marketed as either metallurgical or for use in aggregates.

Not only is the name of the company “RMR Aggregates, Inc.” but on page 1 of the Brierley Associates report in the proposed Plan is the following statement:

The target of the proposed expansion is to extend northward to mine the 150-175 ft of combined limestone and dolomite of the Leadville formation for rock dust and aggregate. *Emphasis Added.*

This immediately raises the question about the total annual productions in Colorado of rock dust and the likelihood RMR could significantly enter that market, or for that matter, how much of the other products on its list could be absorbed into their respective markets. Any aggregate sold from the quarry would have to pass the *McClarty* tests, regardless of its percentage of total carbonates—and that is extremely unlikely. The case of *United States v. McCormick*, 27 IBLA 65 (1976) was one of the very few, if not the only, aggregate deposit to ever pass the *McClarty* tests. The *McCormick* deposit occurred naturally ready to sell in the market place. No drilling, blasting, ripping, primary crushing, no overburden, no sorting, screening, washing and many other favorable attributes. Furthermore, mining of large tonnages of aggregate could explain the proposed production of 5 million tons per year; by contrast, it seems very unlikely that RMR could market 5 million tons of rock dust per year.

Aggregate is a Common Variety Use

Aggregate is a common variety use and aggregate is locatable only if it passes the *McClarty* tests, regardless of the percentage of total carbonate. As mentioned above, aggregate has only been found to be locatable in the *McCormick* case. Where uncommon variety minerals are marketed along with common variety minerals from the same deposit, the mining operation must be profitable on the basis of sales from uncommon variety and cannot be subsidized from sales of the common variety minerals or uncommon variety minerals sold for common variety uses. *United States v. Multiple Use, Inc.*, 120 IBLA 63, 111 (1991). If limestone, including high-purity limestone, is sold for aggregate, or other common variety use, it must be purchased under contract from the BLM under the Material Sale Act (30 U.S.C. 601), providing it does not pass the *McClarty* tests.

MARKETABILITY OF RMR’S LIMESTONE

MARKET AND RELATED TRANSPORTATION POTENTIAL AND CONDITIONS - PROPOSED RMR QUARRY EXPANSION

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There is minimal or no information in P00 as a comprehensive market and transportation plan in Section 1 and 5. Products and targeted markets are generalized with no confirmation that the quarry rock has sufficient limestone suitable material for cement production.

The potential areas and competition in cement and aggregates in a reasonable distance from the RMR project in Glenwood Springs reveals extremely difficult competitive conditions. See:

Exhibit A-1, cement plant locations six western states, Colorado, Wyoming, Nebraska, Utah, New Mexico, Arizona and Montana.

Exhibit A-2, a survey of private aggregate operations on the Colorado Western Slope in twelve counties totaling 313 quarries. The estimated operating tonnage ranges from 5,000 tons per year to 300,000 tons per year with an average size of 10,000 tons per year. Wilson's estimate of that market is 3.1 million tons per year.

Reference to Page 1-14

This list is described as "Limestone-Dolomitic Products of the Mid-Continent Quarry" as products that can be made from the quarry. This list is taken from literature as possible products "chemical limestone" is used for, but not a definitive list of limestone quality substantiated by testing and confirming the rock is suitable for the long lists of uses.

Chemical Limestone Products

Rock dust
Acid neutralization
Cement component
Industrial filler
Fly ash replacement
Dimension stone
Steel making
Glass manufacturing
Water treatment (same as acid neutralization)
Animal feed
Agricultural supplement

Dolomitic Limestone Products

High-strength crushed aggregates
Steel making
Agricultural supplement
Dimension stone

RMR and its predecessor company currently sells or has sold limestone for rock dust control and acid neutralization. They provide no evidence that the limestone or dolomite has been tested for chemical and physical characteristics that would meet any specifications require for use in the manufacture of all of the other "products" listed.

The **lack of product characterization and customer acceptance tests** is a common error by unsophisticated industrial mineral producers. The level of understanding by potential sector entrants leads to overlooking the need for these tests and trials. They often assume any rock from a quarry or mine will meet technical and economic hurdles and the product will be readily accepted by potential customers.

RMR has no substantial evidence from drilling and analysis that would confirm the limestone content in their quarry. The only historic market information they have is evidence by the two products, aggregates and dust suppressors, they have previously sold.

Reference is made to the “product” being a suitable cement component. The three nearest cement plants to Glenwood Springs are in Florence Colorado, Pueblo Colorado and Laramie Wyoming. Each of the plants reportedly have sufficient limestone feed for the foreseeable future.

These three plants as well as the majority of U.S. cement plants are sited within proximity of their limestone plant feed. A few other U.S. cement plants truck limestone feed to the cement up to twenty-five miles. A rate of \$0.06 per ton mile for a 40-ton truck has a transportation of \$2.50 per mile. Rail rates are approximately 4.0 cents per ton mile ¹. RMR proposes shipping by rail approximately 150 miles adding \$9.00 per ton the customer costs.

A critical aspect of cement plant operations is feed quality and moisture content. The principle reason cement plant has a limestone source within a short distance of to the plant is the limestone is blended with other cement components in a blending barn adjacent the cement plant. The mixture is then ground to a fine size for the final feed to the cement plant. Limestone quality is analyzed and controlled by the cement plant control center to maintain strict specifications of the feed components, principally CaO as limestone, silica as sandstone, alumina as clay and iron as iron oxide. The feed is pre-blended in the Feed Barn and fed to the final grinding mill ahead of the kiln feeder system.

RMR has assumed the limestone shipped to these plants will meet the strict feed specifications. The cement plant operator will not likely risk their operations and the required steady state kiln conditions to an outside limestone vendor. When the received limestone does not meet the cement plant specifications, the upsets caused by this “off-spec” material in the plant cannot not be subject to the uncertainties of the vender’s operations.

Reference to Page 5-1.

¹ Association of American Railroads

The only reference to rail transport in the POO is “Both products (limestone and dolomitic limestone) sold to offsite customer s. The primary method of proposed product distribution will utilize the nearby Union Pacific property, approximately 2.6 miles from the quarry”

Based on RMR estimate of 5 million tons per year and seven-day-a week, 12 hours a day of truck traffic to a rail site, approximately 140 rail cars need to be managed per day. RMR has not addressed the logistics in any detail that require loading ten unit trains a week with the UPRR making up that number of trains and adding that traffic to aggregate markets on the Colorado Front Range and the Colorado Western Slope. Some of the Western Slope markets potentially could be served by truck but no details of either rail or truck mode delivery has been provided by RMR.

The Union Pacific Railroad (UPRR) has limited car siding and storage area across the Colorado River from central Glenwood Springs from the west end of Glenwood Canyon to at least eight miles to the west paralleling I70. The possibility of storing and reloading an estimated daily 14,000 tons² of mixed aggregated products requiring under cover storage to prevent moisture contamination and controlling dusting will require significant engineering and construction with requisite capital funding that RMR has not addressed.

The POO also states “the maximum amount of products removed can be assumed to be 50 million tons of limestone and 100 million tons of dolomite limestone”. RMR has not provided any specific information that the tonnage is nothing more than a guess not based on any facts related to drilling data, chemical analysis or resource analysis.

The Colorado aggregate markets require from five to more than fifteen product categories to provide state CDOT contracts, local county and city road construction and maintenance and commercial and residential construction. The POO states “The planned quarry production will be approximately 5 million tons per year”. There is no substantiation of this projected production which represents 30% of the Colorado Front Range aggregate market size and approximately 1.6 times the current estimated Colorado Western Slope market of 3.1 million tons per year.

The RMR Plan of Operation does not take into account the complexities of variable product type demand and quality and only vaguely addresses how they will manage to supply and ship 5 million tons a year of a variety of aggregate products throughout Colorado against strong competition from well-establish aggregate suppliers.

PROPER TYPE OF LOCATION FOR LIMESTONE

² Assuming the 140 rails cars per day.

Importance of Making Proper Location

The importance of making the proper location over a mineral discovery has been clearly stated by the United States Supreme Court. In *Cole v. Ralph*, 252 US 286, 295, 296 (1920), the Court held that "a placer discovery will not sustain a lode location, nor a lode discovery a placer location." Therefore, a placer location will not appropriate a lode deposit and a lode location will not appropriate a placer deposit. Furthermore, both metallic and nonmetallic minerals may be located as lodes providing they are in the right form. This was first established in *Webb v. American Asphaltum Mining Co.*, 157 F 203 (1907)

Building Stone Placer Act Requires Placer Location

In *United States v. United Mining Corp.*, 142 IBLA 339, 364-367 (1998), the Board included sand and gravel (aggregate) in its list of building stones locatable under the Building Stone Act. If the RMR limestone claims are located for aggregate, a building stone, the limestone deposit must be located with placer-type claims as authorized by the Act of August 4, 1892 (27 Stat. 348; 30 U.S.C. 161). Furthermore, the law also requires that building stone placers may be located only on lands "that are chiefly valuable for building stone." In *United States v. Henri (On Judicial Remand)*, 104 IBLA 93, 100 (1988), the Board held that a "mining claim for building stone is locatable only under the placer mining laws, *United States v. Haskins*, 88 I.D. 925, 946 (1981), *aff'd Haskins v. Clark*, No. CV-82-2112-CBM (C.C. Cal. Oct. 30, 1984).

Chemical-Grade Limestone Requires Lode Locations If Deposit Is in Lode Form

If RMR located the deposit for metallurgical or chemical-grade limestone and the deposit is in lode form (high-grade layers/beds sandwiched between low-grade layers), it must be located as a lode claim. The excerpts from RMR's Plan of Operations set forth below confirm that RMR regards the limestone deposit to be in lode form:

The limestone deposit is located within the Leadville Limestone formation. The proposed plan of operations pursues limestone and dolomitic limestone within only the Leadville Limestone formation, which sits in a large *tabular* deposit. (Page 5-1). *Emphasis Added.*

Exploration data has shown the deposit of limestone and dolomitic limestone to be essentially *tabular* along the face of the current hillside above the current mill operations. (Page 5-4). *Emphasis Added.*

The deposit to be mined is entirely in the Leadville Limestone and is roughly *tabular* in nature with a roughly west-northwest to east-southeast strike and 10-30 degree dip to the south-southwest. (Page 13-1). *Emphasis Added.*

In *United State v. Foley*, 142 IBLA 176 (1998), the claimants located a chemical-grade limestone as a building stone placer claim. However, if a chemical-grade limestone is in lode form, but located as a building stone placer, it would be

invalid. Because the BLM had not raised this issue in its *prima facie* case during the contest, the Board could not dispose of the claims on such a basis. The Board said at 188, n. 4:

In *U.S. v. Haskins*, 59 IBLA 1, 49 (1981), the Board stated that if the limestone is chiefly valuable because of chemical or metallurgical properties, the proper mode of location is dependent upon the nature of the deposition. In *Haskins, supra*, at 44, we noted that “[a] placer discovery will not sustain a lode location nor a lode discovery a placer location” (quoting *Cole v. Ralph*, 252 U.S. 286, 295 (1920)). Thus assuming the limestone on the claims is in lode form, the claims, in so far as they purport to be located for chemical-grade limestone, were not properly located as building stone placers. Because this issue was not raised in the contest, however, it may not be relied on by the Board to dispose of the claims.

The Ten-Acre Rule

The Interior Department has “established a rule, that when challenged, the claimant must show that each ten-acre tract on his claim contains a valuable mineral” and that “each ten acre tract must be ‘mineral in character.’” *McCall v. Andrus*, 628 F.2d 1185, 1188 (9th Cir. 1980), *cert. denied*, 450 U.S. 996 (1981); *Lara v. Secretary v. Secretary of the Interior*, 820 F. 2d 1535, 1538 (9th Cir. 1987). The “policy behind the rule applies equally to individual and association placer claims.” *Id.* at 1538. The significance of this rule means RMR must conduct exploratory drilling on each ten-acre tract of its limestone claims. The 10-acre rule is applied on all validity examinations of placer mining claims; “use of the rule is not restricted to patent proceedings.” *Lara v. Secretary of the Interior*, 820 F. 2d 1535, 1539 (9th Cir. 1987).

MISCELLANEOUS

Immense Quantities of Identical Limestone Indicate Common Variety

In *United States v. Coleman*, 390 U.S. 599, 603-604 (1968), The United States Supreme Court said “we believe that the Secretary of the Interior was . . . correct in ruling that “in view of the immense quantities of identical stone found in the area outside the claims, the stone must be considered a common variety.” By all reports, there are immense quantities of identical limestone exposed in the area outside of the RMR claims.

Representative Samples

According to its Plan of Operations, RMR has not yet conducted exploration drilling on the 44 placer claims. If the company does explore the property, it will be crucial for the cores to be of appropriate spacing and depth in order to acquire representative samples. For a sample to be representative, it must approximate as closely as possible the structure, texture, grade, mineralogy and physical and chemical characteristics of the mineral deposit. The evaluation of huge tonnages of material is dependant on the results obtained from small portions of the deposit.

One of the important purposes of geologically mapping the deposit is to establish if geologic continuity is sufficient to yield representative samples; then a sampling program can be designed that will yield representative samples. Because oxidation, enrichment, leaching, alteration or other surface process may change the grade and mineralogy near the surface, surface chip or channel samples may be unreliable. In most cases, the only method to get representative samples is by drilling or deep trenching. Under the Mining Law, the claimant is required to make physical exposure of the discovery—and only by drilling or deep trenching is it possible to comply with this discovery requirement. For this reason, RMR has not made a discovery on all of the claims.

MARKETABILITY EXHIBITS

NOTES TO FILE

PRIVATE AND CONFIDENTIAL

GLENWOOD SPRINGS PROJECT

October 20, 2018, revised December 27, 2018 and April 11, 2019

Front Range Colorado and Wyoming and aggregate producers and customers.

From Dave Beiber, Manager Geology/Survey, Martin Marietta lecture on the Aggregate Industry, Colorado School of Mines, Mining Engineering Department Senior Design Class, March 2019.

Estimated Colorado Front Range annual aggregate sales

- Total 15 million tons

- Approximately 60% controlled by Martin Marietta (MM) or 9 million tons

- Aggregate Industries and Albert Frei & Sons control close to 40% of the remaining total approximately 5.0 million tons

- Aggregate Industries Quarry near Morrison, Colorado has a smaller market than MM Spec Ag and Frei or approximately 2 million tons.

- Frei Quarry at I 70 and US 6 estimated rated annual capacity is 3.3 million tons

- The three companies dominate the Front Range aggregate market and can adjust product mix and prices on a daily basis to meet market demand

Marin Marietta

- Expansion plans

Expanding Parkdale Quarry in Canon City "to meet growing Front Range demand" which I estimate to be larger than Spec Ag but I do not have a specific production increase.

Reconfigure Granite Canyon Quarry on I-80 in southern Wyoming to serve the Front Range market and continue supplying road ballast for UPRR. Existing large rail loadout, 115 miles from Denver.

MM - Specification Aggregate Quarry in Golden, Colorado estimated annual capacity of 500,000 to 750,000 tons. Includes ready mix and asphalt plant on site.

MM - Riverbend Quarry in Adams County, Colorado, sand only, estimated to be 300,000 tons per year.

MM – Front Range Quarry, also in Canon City serves Kansas market by rail with specialty aggregate meeting Kansas DOT specifications.

I do not have an estimate production the MM Granite Canyon but the three MM large quarries, Spec Ag, Parkdale, Granite Canyon and several smaller quarries make up the 9 million tons.

Western Slope aggregate producers and customers.

I have interviewed some of the western slope aggregate producers who asked not to be identified. I did not mention my work with the Glenwood Spring group or RMR.

There are a number of aggregate producers in western Colorado from the Meeker-Grand Junction area south to Cortez and east to Alamosa. Several companies produce aggregates in the range of 70,000 to 100,000 tons per year of product from alluvial sources. Based on my interviews and a compilation of Colorado Division of Reclamation, Mining and Safety reclamation permits I estimate that that market is approximately 1,000,000 tons to 1,600,000 tons per year. The upper limit is when state and federal funds are available for highway improvement and repairs. Some of the tonnage also shipped to the Moab Utah area and Four Corners in New Mexico.

My opinion is that these markets are well served and the producers are family owned with the exception of subsidiaries of Summit Materials and Oldcastle Materials. Competition is less intense than in the Colorado Front Range but local customer loyalty is often the key to sales. Typical products sold are road base, road repair and new construction, asphalt and ready-mix.

A possible RMR market to the west of Glenwood Springs would extend to approximately a 100- to 125-mile radius to the west and northwest of the RMR operation. Based on the number of smaller quarries in the western Colorado

area, RMR might be able to serve 100,000 to 150,000 tons per year in the aggregate markets.

Attached to this report separately is:

EXHIBIT A which contains:

**MARKET AND TRANSPORTATION POTENTIAL AND CONDITIONS -
PROPOSED RMR QUARRY EXPANSION dated April 11, 2019 with:**

Exhibit A-1, Rocky Mountain Area Cement Plants. This information supports the opinion that possibility of RMR supplying **ANY** limestone to cement plants in Colorado, Wyoming and other adjoining states is remote.

Exhibit A-2, Colorado Western Slope Aggregate Quarries. The author's opinion is the ability of RMR shipping any limestone to the Colorado Front Range would face intense competition from several large aggregate suppliers in that area and a transportation cost essentially equal to their Glenwood Spring quarry FOB selling price. This exhibit demonstrates a similar intense competition from a large number of aggregate suppliers in twelve counties on the Colorado Western Slope.